

LISTING OF THE CLAIMS

The status of the claims is as follows:

1. (previously presented) A method, comprising:
 - (a) forming a preblend comprising:
 - (i) a diluent polyester,
 - (ii) a polyamide material, wherein the polyamide material comprises a polymer containing m-xylylenediamine monomer units, p-xylylenediamine monomer units, or a mixture thereof, and
 - (iii) cobalt or a complex or salt thereof present in the preblend in an amount of 20 to 2,000 parts per million, by weight;
 - (b) providing a base polyester;
 - (c) introducing the preblend of step (a) and the base polyester of step (b) into a molding apparatus to permit melting and admixing of the preblend and the base polyester;
 - (d) injection molding or extruding the admixture of step (c) in the apparatus to provide a preform; and
 - (e) expanding the preform of step (d) to provide a plastic container having a barrier layer formed from the admixture of step (c);
 - (f) wherein the plastic container is stable during unfilled storage and the barrier layer has an oxygen scavenging property that is activated after filling the container with an aqueous fluid, and wherein activation results from filling.
2. (original) The method of claim 1 wherein the plastic container is a multilayer plastic container.
3. (original) The method of claim 1 wherein the plastic container is a monolayer plastic container.
4. (cancelled)

5. (previously presented) The method of claim 1 wherein the preblend of step (a) has a greater stability after storage for six months at 25°C and 40% relative humidity than a blend containing only a polyamide material and an oxygen scavenging material stored under identical storage conditions.

6. (original) The method of claim 1 wherein the preblend is in a form of solid particles.

7. (original) The method of claim 1 wherein the diluent polyester is present in the preblend in an amount of about 25% to about 75%, by weight of the preblend.

8. (original) The method of claim 1 wherein the diluent polyester comprises a homopolymer or a copolymer of a polyethylene terephthalate, a polyethylene naphthalate, a polybutylene terephthalate, a cyclohexane dimethanol/polyethylene terephthalate copolymer, or a mixture thereof.

9. (previously presented) The method of claim 7 wherein the base polyester is a virgin bottle grade polyester and the admixture of step (c) consists essentially of the base polyester and the preblend.

10. (original) The method of claim 1 wherein the polyamide material is present in the preblend in an amount of about 25% to about 75%, by weight of the preblend.

11. (cancelled)

12. (previously presented) The method of claim 1 wherein the polyamide material comprises a polymerization product of m-xylyenediamine and adipic acid.

13-15. (cancelled)

16. (previously presented) The method of claim 1 wherein the preblend comprises about 30% to about 70%, by weight, of the diluent polyester comprising a polyethylene terephthalate, a polyethylene naphthalate, or a mixture thereof; about 30% to about 70%, by weight, of the polyamide material; and about 50 to about 1500 ppm, by weight, of a salt or a complex of cobalt.

17. (original) The method of claim 1 wherein the base polyester is in a form of solid particles.

18. (previously presented) The method of claim 9 wherein the preblend and the base polyester are admixed in an amount of about 0.5% to about 20%, by weight, of the preblend, and about 80% to about 99.5%, by weight, of the base polyester.

19. (previously presented) The method of claim 9 wherein the base polyester is selected from the group consisting of a polyethylene terephthalate, a polynaphthalene terephthalate, a polybutylene terephthalate, a cyclohexane dimethanol/polyethylene terephthalate copolymer, or a mixture thereof.

20. (previously presented) The method of claim 1 wherein the base polyester comprises a virgin bottle grade polyethylene terephthalate, a post consumer grade polyethylene terephthalate, or a mixture thereof.

21. (previously presented) The method of claim 1 wherein the preform contains about 10 to about 80 ppm, by weight, of cobalt or a salt or complex thereof.

22-24. (cancelled)

25. (previously presented) The method of claim 1, further comprising:
activating the oxygen scavenging property of the barrier layer by filling the plastic container with the aqueous fluid.

26. (previously presented) The method of claim 1, wherein the plastic container has an oxygen permeability of 0.035 cc O₂/package/day or less after filling with water for 48 hours.

27. (previously presented) A method, comprising:

- (a) forming a preblend comprising:
 - (i) a diluent polyester,
 - (ii) a polyamide material, wherein the polyamide material comprises a polymer containing m-xylylenediamine monomer units, p-xylylenediamine monomer units, or a mixture thereof, and
 - (iii) cobalt or a complex or salt thereof;
- (b) providing a base polyester consisting essentially of a virgin bottle grade polyester;
- (c) introducing the preblend of step (a) and the base polyester of step (b) into a molding apparatus to permit melting and admixing of the preblend and the base polyester to form an admixture;
- (d) injection molding or extruding the admixture of step (c) in the apparatus to provide a preform; and
- (e) expanding the preform of step (d) to provide a plastic container having a barrier layer formed from the admixture of step (c);
- (f) wherein the plastic container has an oxygen permeability in cc O₂/package/day after filling with water for 48 hours, that is less than the oxygen permeability of the container prior to filling with water, and wherein activation of oxygen-scavenging results from filling.

28. (previously presented) The method of claim 27, wherein the preblend comprises:
about 30% to about 70%, by weight, of the diluent polyester comprising a polyethylene terephthalate, a polyethylene naphthalate, or a mixture thereof;
about 30% to about 70%, by weight, of the polyamide material comprising the polyamide material; and
about 50 to about 1500 ppm, by weight, of cobalt or a complex or a salt thereof.

29. (previously presented) The method of claim 9, wherein the preblend comprises:
about 30% to about 70%, by weight, of the diluent polyester;
about 30% to about 70%, by weight, of the polyamide material; and
about 50 to about 1500 ppm, by weight, of cobalt or a complex or salt thereof.
30. (previously presented) The method of claim 9, wherein the base polyester is a virgin bottle grade polyethylene terephthalate.
31. (previously presented) A method, comprising:
filling a monolayer plastic container with an aqueous product to activate an oxygen scavenging property of the plastic container, wherein the container has been produced by a process comprising:
(a) forming a preblend comprising:
(i) a diluent polyester,
(ii) a polyamide material comprising a polymer containing m-xylylenediamine monomer units, p-xylylenediamine monomer units, or a mixture thereof, and
(iii) cobalt or a complex or salt thereof;
(b) providing a base polyester;
(c) introducing the preblend of step (a) and the base polyester of step (b) into a molding apparatus to permit melting and admixing of the preblend and the base polyester;
(d) injection molding or extruding the admixture of step (c) in the apparatus to provide a monolayer preform; and
(e) expanding the monolayer preform of step (d) to provide a monolayer plastic container having a barrier layer formed from the admixture of step (c).

32. (previously presented) The method of claim 31, wherein the preblend comprises:
about 30% to about 70%, by weight, of the diluent polyester comprising a polyethylene terephthalate, a polyethylene naphthalate, or a mixture thereof;
about 30% to about 70%, by weight, of the polyamide material; and
about 50 to about 1500 ppm, by weight, of cobalt or a complex or a salt thereof.

33. (previously presented) The method of claim 9, wherein the cobalt or a salt or complex thereof is present in the preblend in an amount of about 100 to about 1,000 parts per million, by weight of the preblend.